Lee J. Pratchett*

An areal and typological appraisal of gender in Ju

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Abstract: This paper provides an exhaustive description of the gender system in the Tsumkwe Jul'hoan variety of Ju (Kx'a), a gender system that is largely insensitive to number and natural sex distinctions. The paper also highlights some important points of divergence in a closely related variety due to contact interference while nevertheless maintaining culturally salient aspects of the gender system.

Keywords: agreement; gender; Jul'hoan; Khoisan; number

1 Introduction

Ju language varieties (referred to also as !Xun, e.g. Heine and König 2015: 18–19) are spoken by San hunter-gatherer communities in southern Angola, northern and northeastern Namibia, and northwestern Botswana. Ju is best described as a language-continuum with two principal subgroups based on morphosyntactic features, Northwestern Ju (NW Ju) and Southeastern Ju (SE Ju, see Heine and König 2015: 22ff.). This study is concerned primarily with Tsumkwe Jul'hoan (henceforth Jul'hoan), a SE Ju variety spoken in the Nyae Nyae conservancy in Namibia.

Ju and the distantly related sister language ǂ'Amkoe belong to the Kx'a family. Kx'a, Tuu, and Khoe-Kwadi form the three genealogically unrelated families subsumed under the label "Khoisan" (see Güldemann 2014 for modern classification). The three lineages share certain features. Gender, the focus of this paper, is one such feature. A closer look at the typological parameters of the gender systems in each, however, reveals two distinct "types" of system: one in Khoe(-Kwadi) and another common to both Kx'a and Tuu (= "Non-Khoe"; see Güldemann 1998). The latter type is elaborated upon here (see Job and Güldemann, this volume, for gender in Khoekhoe). Following some linguistic preliminaries in this section, the Jul'hoan gender system is described in Section 2 using Güldemann and Fiedler's (2019) novel analytical framework according to four distinct concepts: nominal form class (Section 2.1.1), agreement class (Section 2.1.2), deriflection (Section 2.2.1), and gender

***Corresponding author: Lee J. Pratchett**, Institute for African Studies, Goethe University Frankfurt am Main, Frankfurt a.M., Germany; and Department of Asian and African Studies, Humboldt-Universität zu Berlin, Berlin, Germany, E-mail: lee.pratchett@hu-berlin.de

(Section 2.2.2). Section 3 provides some areal contextualization and explores the repercussions of contact between Ju and languages with different gender systems.

Jul'hoan has sparse nominal and verbal morphology and a strict subject-verb-object word order in basic clauses. Verbs are not marked morphologically for number except for a handful of verbs with suppletive forms that are triggered by the number value of a core argument. In (1a–1b) the verb forms *!hún* (SG)/*!'óán* (PL) 'kill' agree with object nominal forms that are morphologically neutral to the encoding of number (see Section 2.1.2.1). Jul'hoan is principally head-initial. The vast majority of modifiers are verbal and require relative clause syntax. This includes demonstratives, as illustrated in (2a–b).

(1) a. *n!hã̀ì* ***!hún*** ***gúmí***
lion.1 kill:SG cow.1
'The lion kills the cow.'
b. *n!hã̀ì* ***!'óán*** ***gúmí***
lion.1 kill:PL cow.4
'The lion kills the cows.' [Dickens 2005: 87–88]

(2) a. *dshàú* ***hè***
woman.1 1.PROX
'This is a woman.'
b. *dshàú-**à*** ***hè***
woman.1-REL 1PROX
'this woman' (lit. the woman who is this one.)[1]

Nouns can be modified by a set of "irregular descriptive adnouns" which follow the head noun and assume number marking (Snyman 1970; called "adjectives" in Dickens 2005: 29f.). Some behave ambicategorically: in (3), *jàn* 'good' is an adnoun but a verb in (4).

(3) *glàè* *n‡ò̀à̀hã̀n* *jú* *kò* *tcí* ***jàn**-sín*
arrive tell:VE people.2 MPO thing.3 good-PL
'Go and tell the people good things.' [Dickens 1992: 13; Pratchett, fn.]

(4) *à* *glà'á-sì* ***jàn*** *tè* *à* *lóá* *lláú* *sé* *tcí*
2SG eye.3-PL be.good and 2SG NEG well see thing.3
'Your eyes are good yet you do not see the thing well.'
[Dickens 1992: 16; Pratchett, fn.]

1 Uncited examples are based on my field notes. A linguistic analysis and translation is provided for examples sourced from the monolingually-transcribed Jul'hoan folktales (i.e. Dickens 1992). These examples are cited as: Dickens (1992), Pratchett, fn.

Compounds are formed by juxtaposition and are head-final. As such, the morphosyntactic properties of the compound-final noun, such as inflection and controlling agreement behavior, are transferred to the compound, as shown in (5). There are exceptions, however: in (6), semantics overrides morphosyntax and the compound *tzí-!há* 'wild game' triggers the agreement class typical for animates (see Section 2.1.1).

(5)	*!xù*	*ǂxànù*	→	*!xù-ǂxànù*	
	god.1	paper.4		god-paper.4	
	'god'	'paper'		'bible'	[Dickens 2009: 42]

(6)	*tzí*	*!há*	→	*tzí-!há*	
	bush.3	animal.3		bush-animal.1	
	'bush'	'animal'		'wild game'	[Dickens 2009: 279]

Gender across Ju is relatively heterogeneous (see Section 3; see also Heine and König 2015: 133–143). Snyman (1970) provides the first detailed linguistic description of the gender system in Jul'hoan – and of any Khoisan language. Modified slightly by Dickens (2005), it remains the backbone of modern analyses both in terms of nominal classification (e.g. Honken 2013) and agreement behavior. As highlighted by Güldemann (2000), previous analyses obscure the distinction between agreement class and gender, and merge gender and number, systems which should be analyzed independently.

2 Description of the Jul'hoan gender system

2.1 The morphosyntax of nominal forms

The next section proceeds as follows. In Section 2.1.1, the agreement classes are described using naturalistic data wherever possible to illustrate agreement behavior. This is followed by a description of the nominal form classes in Section 2.1.2. The relationship between nominal form classes and agreement classes is described in Section 2.1.3.

2.1.1 Agreement and agreement (AGR) classes

An agreement class (AGR) can be viewed as "a consistent agreement pattern" (Corbett 1991) triggered by a group of nominal forms. The agreement classes triggered by a noun across all number values constitute a gender. Agreement targets in Jul'hoan include unmarked personal pronouns, the possessum

Table 1: Tsumkwe Jul'hoan agreement classes (cf. Güldemann 2000: 18).

AGR	Number	PRO	POSS	PROX	Basic semantics	
					human	non-human
1	SG,PL, TN	*hà̀*	*má*	*hè*	singular	singular
2	PL	*sì*	*hì̀*	*hè*	plural	–
3	SG,PL, TN	*ká*	*gá*	*kè*	–	abstract, body parts
4	SG,PL, TN	*hì̀*	*hì̀*	*hè*	plural	plural

pronouns, and the verbal proximal demonstrative. Jul'hoan has four agreement classes, shown in Table 1 (adapted from Güldemann 2000: 18). Three agreement classes are insensitive to formal number exponence, while AGR2 is used strictly with human plural nouns. AGR3 is the most differentiated agreement class and the anaphoric pronoun is the most differentiated target, as illustrated in (7–10). Free pronouns can also function either as a possessive pronoun as in (8) or as a deictic marker, as in (9).

(7) AGR1

lKàècè	*hò̀*	***dsòó***	*tè*	*mí*	*lóá*	*hò̀*	***hà̀***
PN.1	see	ostrich.1	but	1SG	NEG	see	1PRO

'lKaece saw an ostrich$_x$ but I didn't see it$_x$.' [Dickens 1992: 16; Pratchett, fn.]

(8) AGR2

jú	*lxò̀à*	*ká*	***sì***	*!ká-sì*	*nlá'ng*
people.2	light.fire	and	2PRO	heart.3-PL	be.nice

'People$_x$ lit a fire and were happy.' (lit.: their$_x$ hearts are nice.) [Dickens 1992: 16; Pratchett, fn.]

(9) AGR3

l'ú	*tà̀qm*	***ká***	***gllxàrú***	*nláng*	*mí*	*ká*	*sáú*	***ká***
put	down	3PRO	root.sp.3	PURP	1SG	then	roast	3PRO

'Put down the *gllxaru* root$_x$ so that I can roast it$_x$.' [Biesele 2009: 48]

(10) AGR4

hà̀	*n!hám*	***nlò̀qm***	*tsán*	*òf*	***hì̀***	*n!ànì*
1PRO	hook	springhare.4	two	or	4PRO	three

'He hooked two or three springhares.' [Pratchett, fn.]

Possessum pronouns that substitute a controller noun are another kind of agreement target. The possessum pronoun can additionally host number marking to

index the number value of the controller noun. This is deemed external to the agreement class system proper.

(11) *sì* *lóá* *!'hàn* ***!há**-s-à* *ó* *tzí* ***gá**-sì*
2PRO NEG know animal.3-PL-REL COP bush.3 3POSS-PL
'They don't know the wild animals' [lit.: the animals$_x$ that are those$_x$ of the bush]. [Dickens 1992: 14; Pratchett, fn.]

The proximal demonstrative is the final agreement target. There are two forms *hè* and *kè*, which derive historically from the fusion of a pronoun and a proximal morpheme, i.e. *ha + e, *hi + e > *he*; *ka + e > *ke* (Lionnet 2014). Agreement is mandatory whether the demonstratives function predicatively, as in (12), or attributively, as in (2a) above.

(12) *ǂo̍a̍h* *tè* *kòm* *hì̍* ***!ù̍h**-sì* ***kè***
giraffe.4 ? ID 4PRO track.3-PL 3PROX
'It is giraffe! These$_x$ are their tracks$_x$.' [Dickens 1992: 14; Pratchett, fn.]

2.1.2 Nominal form (NF) classes and relationship to agreement classes (AGR)

The next subsection describes nominal form classes (NF) in Jul'hoan, defined as "word forms with identical morphological or phonological properties" that "[…] can have an intricate relationship to agreement classes" (Güldemann and Fiedler 2019: 99). The following subsections distinguish inflectional and derivational morphology. Table 2 provides a summary of the nominal form class markers, to be described below.

2.1.3 Inflectional morphology

The lexical distribution of marked plurals is one way that Ju varieties diverge. In Southern Jul'hoan (SE Ju), for example, all nouns have marked plural forms, while in Ekoka !Xun (NW Ju) "most nouns are transnumeral" (Heine and König 2015: 143). In Jul'hoan, most nouns show a formal opposition between singular and plural nominal forms. Four singular nominal forms are given in (13a–d) and their plurals in (14a–d). The singular is morphologically unmarked and agreement class is entirely covert.

(13) a. *glxàn*-Ø bead.4-Ø 'plastic bead'
b. *tjù*-Ø house.3-Ø 'woman'
c. *!úí*-Ø eZ.1-Ø 'elder sister'
d. *!'ho̍àn* man.1 'man'

(14) a. *glxàn*-**Ø** bead.4-Ø 'plastic beads'
b. *tjù*-***sì*** house.3-PL 'houses'
c. *!úí*-***sín*** eZ.2-PL 'elder sisters'
d. *nllàqè* men.2 'men'

Table 2: Nominal form classes of Tsumkwe Jul'hoan.

NF	Number	Semantics	Example	
-Ø	SG	singular	*dshàú*	'woman'
	TN	–	*gúmí*	'cow'
-SÌ	PL	plural	*!àqèkxàò-sì*	'hunters'
-SÍN	PL	kin, in-group	*gllàq-sín*	'aunts'
-SÍ	SG	derived nouns of	*djxàní-sí*	'manner of dancing
-SÍ-SÌ	PL	manner or place	*djxàní-sí-sì*	'manners of dancing'
-MÀ	SG	diminutive	*gǂhòàn-mà*	'puppy'
-MH(I)	PL		*dshàú-mhí*	'girls'
-DÍ	SG	female/feminine	*n!hàì-dí*	'lionness'
-DÍ-SÍN	PL		*n!hàì-dí-sín*	'lionesses'
-G!OQ	SG	male/masculine	*n!hàì-g!ǒq*	'lion'
-NIIAQÈ	pl		*gúmí-nllàqè*	'bulls'

Approximately a quarter of all nouns in the Jul'hoan dictionary (Dickens 2009) behave as *glxàn* 'bead' in (13a–14a) and are morphologically neutral with respect to number, i.e. 'transnumeral'. Note that in the case of *glxàn* 'bead', number is also unexpressed by the agreement class system (see Section 2.2.2).

Just under three quarters of all nouns form their plurals using the nominal form class suffix *-SÌ*, as in (14b) *tjù-sì* 'houses'. This class includes humans (e.g. *dshàú* 'woman'), many non-human animates (e.g. *l'àò* 'buffalo'), ethnic groups (e.g. *Tàmàh* 'Herero'), body parts except stomach organs (e.g. *nlái* 'head'), liquids (e.g. *g!ú* 'water'), and abstract nouns (e.g. *ll'àè* 'time'). This nominal form class is distributed across all agreement classes (see Section 2.1.3).

Number is marked on kinship terms with the suffix *-SÍN*, as shown (14c). It is possible for generic human nouns to take the kinship plural suffix in lieu of the default plural suffix, as shown in (15). The kinship plural suffix is identical in form with the associative plural suffix, as illustrated in (16).

(15) *jù-à* *lóá* *'ń* *lxòà* *hà* ***dshàú-sín***
person.1-REL NEG eat COM 1.PRO woman.2-PL
'A person who does not eat with his wives.' [Biesele 2009: 34]

(16) *ká* *hà* *hò* ***G‡kx'àò N!à'àn-sín*** *hà* *kòà̀q* *sì*
when 1.PRO see PN.2-ASSC PRO.1 fear 2.PRO
'When he saw G‡kx'àò N!a'an and co., he feared them.'
[Dickens 1992: 41; Pratchett, fn.]

Four nouns form their plurals by means of full or partial suppletion: *!'hõàn~nllàqè* 'man/men', *jù~jú* 'person', *dã̀'àmà~dà'ábí* and *mà~mhí*, both of which mean 'child'. In what is most likely due to analogical leveling, both *dà'ábí* and *mhí* may take the plural suffix ***-SÌ*** given its use with almost all human nouns. I opt to treat these lexemes as exceptions rather than productive nominal form classes.[2]

A peculiar characteristic of relative clause morphology results in all contextually plural nouns being marked in an identical fashion, irrespective of their typical nominal form class. This is illustrated (17a–c) by three plural nominal forms as subjects of declarative clauses: *gúmí-Ø* 'cows', *dshàú-sì* 'women', and *nllàqè* 'men'. In (18a–c), the same nouns appear as the heads of relative clauses marked with the plural relative clitic *-sà*, which represents the fusion of the plural suffix *-sì* and the relative marker *-à*. The few lexemes with suppletive plural forms are thus marked twice for number, as in (18c).

(17) a. *dshàú-sì* *hè*
woman.2-PL 2.PROX
'These are women.'
b. *gúmí* *hè*
cow.4 4.PROX
'These are cows.'
c. *nllàqè* *hè*
men.2 2.PROX
'These are men.'

(18) a. *dshàú-**s**-à hè*
woman.2-PL-REL 2.PROX
'these women'
b. *gúmí-**s**-à* *hè*
cow.4-PL-REL 4.PROX
'these cows'
c. *nllàqè-**s**-à* *hè*
men.2-PL-REL 2.PROX
'these men'

2 Curiously, tonal alternations are involved in three of these exceptional plural forms (low to high). This is found with a handful of nouns in NW Ju and in ǂ'Amkoe plural is marked on body part terms "by vowel change and shifting the base tone to a rising tone" (Honken 2013: 249).

2.1.3.1 Derivational morphology

This section provides a more exhaustive description of derivational morphology than strictly relevant to the Jul'hoan agreement system and includes some categories due to their broader typological and areal significance (see Section 3).

The simplest means of deriving deverbal nouns is by zero-conversion, as shown in (19). Deverbal nouns trigger AGR3 irrespective of their number value.

(19)

djxàní	>	*djxàní*	>	*djxàní-sì*
dance		dance.3		dance.3-PL
'to dance'		'a dance'		'dances'

Agentive nouns are formed with the suffix *-kxàò* derived from the lexical root 'owner, boss' (Dickens 2009: 231). As a human noun, it triggers the "human gender" (the pairing of AGR1 and AGR2, see Section 2.2.2), as in (20).

(20)

!ǜqè	>	*!ǜqè-**kxàò***	>	*!ǜqè-**kxàò**-sì*
hunt		hunt-AGT.1		hunt-AGT.2-PL
'to hunt'		'a hunter'		'hunters'

Place or manner nouns are derived with the high-toned suffix *-SÍ* (not to be confused with the low-toned plural suffix *-SÌ)* and trigger AGR3. This is illustrated in (21) with the verb *tòàn* 'to finish' which triggers the proximal demonstrative form *kè* rather than *hè* (see Section 2.1.1).

(21)

mí	*tòàn-**sí***	*hìn*	***kè***
1SG	finish-NMZ.3	EMPH	3.PROX

'the end' (lit.: this is my ending) [Pratchett, fn.]

2.1.3.2 Between inflectional and derivational morphology

A subset of post-nominal elements encodes both number and derivational categories simultaneously. Transparently lexical in origin, synchronically these markers sit at varying points on a grammaticalization scale from (postposed) noun to functional gram.

The suffixes *-MÀ* and *-MHÍ* (or *-MH*) mark the diminutive for singular and plural, as shown in (22). The suffixes can be hosted by any noun, irrespective of agreement class and semantics. This can result in number being marked twice, as in (22d).

(22) a. *dshàú-**mà*** b. *dshàú-**mh***
woman.1-DIM woman.2-DIM:PL
'girl' 'girls'
c. *!'hm̀̀àn-**mà*** d. *nllm̀̀qè-**mh***
man.1-DIM men.2-DIM:PL
'boy' 'boys'

The suffixes represent the grammaticalization of the suppletive nouns *mà* (SG) and *mhí* (PL) 'child/offspring'. As lexical words they trigger the "human gender" (AGR1/AGR2). As functional words, they lose this lexical property and agreement is triggered by the semantic head as the derivative base, as demonstrated in (23). The diminutive markers can also be hosted by the verb 'be small' to express paucity, as illustrated in (24). These attributes further demonstrate the grammaticalized status of the suffixes. Relativized nominal forms hosting plural diminutive morphology follow the pattern identified in (18) above. This is illustrated by (25).

(23) *tè* *!ű* *cú* *tè* ***n!óm-mà*** ***kè*** *cú*
and valley.1 lie and mountain.3-DIM:REL 3.PROX lie
'A valley lies here and this hill stands here.' [Biesele 2009: 95]

(24) *g!ú-mà* ***tzé-mà*** *hè* *è-tsá* *mí* *txún* *kòh* *kxàè*
water.3-DIM:REL be.small-DIM REL 1PL.E-D 1SG aunt.1 PST collect
'A little bit of water which my aunt and I collected.'
[Dickens 1992: 6; Pratchett, fn.]

(25) *!há-**mh**-**s**-à* *kè*
animal.3-DIM.PL-PL-REL 3.PROX
'these little animals'

Phonological reduction provides evidence for the grammaticalization of lexical words to derivational grams. Jul'hoan has rigid phonotactic templates for lexical and grammatical words typical of "Khoisan" languages. Lexical words are essentially bimoraic and adhere to three basic patterns: CVCV, CVV, and CVN (Nakagawa 2012).[3] Conceivably, *-mà* and *-mhí* have been reduced to a monomoraic CV template reserved for functional words. Indeed, *-mhí* typically surfaces as *-mh*. There is also evidence for the lexicalization of *-mà*. This is clearest with CVV stems where both vowels are identical and therefore realized phonetically as a short sequence. Over time, the suffixes become reinterpreted as part of the root. This is

3 The Jul'hoan orthography codifies sequences of identical vowels by a single vowel.

illustrated in (26) by *tsúmà* 'uncle' (younger than ego), derived from *tsúú* 'uncle' and the diminutive suffix.

(26) a. *tsúmà* (< tsúú-mà)
uncle:DIM.1
'uncle' (younger than ego)

b. *tsúmà-sín* (< tsúú-mà-sín)
uncle:DIM.2-PL
'uncles' (younger than ego)

A little described aspect of Jul'hoan nominal morphology is the encoding of natural sex by suffixing *-DÍ* 'female' and *-G!OQ* [ǃo̰ˤ] 'male'. The feminine plural marker involves the stacking of the suffix *-DÍ* and the plural kinship suffix *-SÍN*. The feminine suffix derives from the Proto-Ju word *de 'mother' (cf. Heine and König 2015: 202). As for the kinship/associative plural suffix *-SÍN*, it may plausibly derive from the Proto-Ju word for 'younger sibling'. This is reconstructed as *tshiŋ and the reflexes *tshín* and *sín* can both be found in Ju (Boden et al. 2014: 77). The phonological reduction of *tshiŋ is indicative of grammaticalization. Masculine plural nominal forms take the suffix *-NllAQE* [ŋllaˤe]. The pair of masculine markers are grammaticalizations of suppletive nouns *g!òq* 'male' and *nllàqè* 'males, men'. As with the diminutive markers, when the lexical words for 'male(s)' and 'female(s)' grammaticalize to suffixes, they no longer control agreement behavior, as proven by (27b) and (28b).

(27) a. *g!à-!kúí*
rain-hair.3
'cloud'

b. *g!à-!kúí-**dí***
rain-hair.3-FEMALE.SG
'a rain producing cloud'

(28) a. *nlhò-**g!òq***
plant.sp.1-MALE.SG
'"hairy" *commiphora africana*'

b. *nlhò-**n**llàqè*
plant.sp.1-MALE.PL
'clump of "hairy" *commiphora afr.*'

With inanimates, the markers encode oppositions relating to size and shape (Aikhenvald 2016: 33–47): 'female' denotes broader objects, fruit-bearing plants, succulents, and rain clouds; 'male' denotes longer, slender or wispy varieties of plants and plant morphology, e.g. sharp thorns. 'Female' and 'male' also translate 'left' and 'right', as in (29).

(29) *tè* *gù* *hà* *!'hòàn* *tè* *ú* *l'ú-á* ***dòm-g!òq***
and take 1.PRO man.1 and go insert-VE grave.3-MALE.SG
tè *hà* *tàqè* *hà* *l'ú-á* ***dòm-dí***
and 1PRO mother.1 1.PRO insert-VE grave.3-FEMALE.SG
'Then [she] took her husband and put him into the right grave and as for her mother, she put [her] into the left grave.' [Dickens 1992: 29; Pratchett, fn.]

2.1.4 Nominal form classes versus agreement classes

The mapping of nominal form classes and agreement classes helps depict how the two interact. In the interest of clarity, "core" nominal form classes, i.e. those which exhibit a more intimate association with particular agreement classes (Figure 1a), are distinguished from a more exhaustive overview (Figure 1b). Nominal form classes are represented by the suffixes and agreement classes are represented the non-speech act pronouns. Only the element *sì* is shared across both systems: conceivably, the plural suffix *-SÌ* evolved out of the pronoun *sì* (Güldemann 2004: 298–299; see also Greenberg 1977). Only the following nominal form classes to

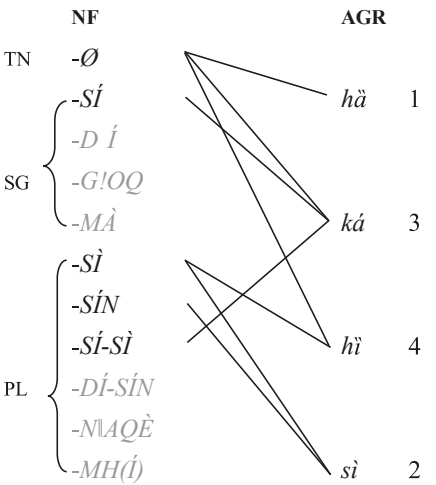

Figure 1a: Relationships between "core" NF classes and AGR classes.

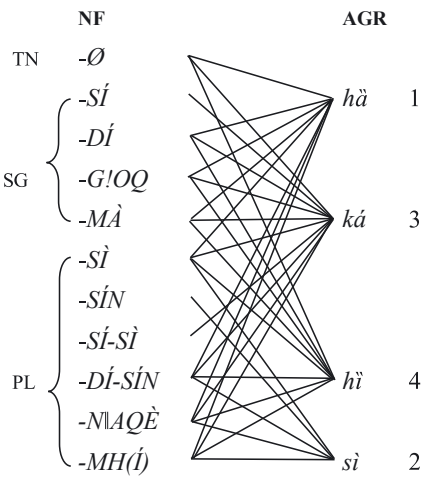

Figure 1b: Relationships between all NF classes and AGR classes.

exhibit an intimate association with a particular agreement class: *-SÍN* (kinship plural) and AGR2; and *-SÍ* and *-SÍ-SÌ* (deverbal nouns of place/manner) and AGR3. The plural suffix *-SÌ* does not trigger a particular agreement class, while its formal counterpart in the agreement class system (AGR2) can only be triggered by plural nominal form classes.

2.2 The behavior of nominal lexemes

The next subsections describe the gender and deriflection systems in Jul'hoan and illustrate the extent to which the two systems interact.

2.2.1 Gender system

The four agreement classes give rise to five genders (see Corbett 1999 for definition): two paired genders and three single-class genders (Figure 2). This differs slightly from previous analyses. Güldemann (2000: 23) treats genders III, IV, and V as pairings of singular and plural agreement classes. However, number is not formally expressed by the agreement class system for nouns assigned to these genders. For this reason I analyze genders III, IV, and V as single-class genders that are neutral to number values. It should be noted that the single-class genders are not composed solely of transnumeral nouns, and transnumeral nouns also trigger contrastive agreement classes. This is discussed further in Section 2.2.3. Some typologically interesting properties of the Jul'hoan gender system, described in Güldemann (2000), can be summarized as follows. Except for AGR3, agreement classes partake in more than one gender. Agreement classes can also have more than one number value in the gender system globally, e.g. AGR4 is plural in gender II but insensitive to number in gender IV.

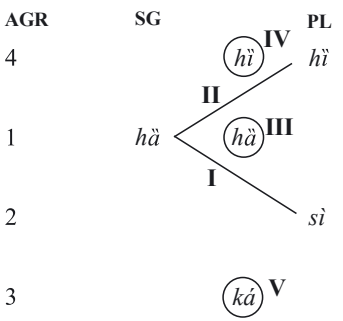

Figure 2: Gender system of Tsumkwe Jul'hoan.

Table 3: Gender assignment criteria in Tsumkwe Jul'hoan.

AGR	Gender	Freq.	Semantic core	
			Dickens (2005)	**Additional notes**
hà̀/sì	I	143	kin, "in-group" humans	Christian, menstruation
hà̀/hì̀	II	399	"out-group" humans, non-human animates	14 tools, deity and devil, child born out of wedlock
hà̀/hà	III	526	plants, plant-based food	cosmology, weather terms, coordinates, tools
hì̀/hì̀	IV	112	long things	stomach organs, fire, insects, crops and their produce (e.g. beer)
ká/ká	V	1,106	body part terms, verbal nouns, events	generics, collective forms for animals, liquids, abstract nouns (incl. 'thing')

The Jul'hoan system stands out cross-linguistically both because genders outnumber agreement classes, and because it provides counterevidence to Greenberg's universal (no. 37) "a language never has more gender categories in nonsingular numbers than in the singular" (Greenberg 1963: 112). Lexical classification across the five genders is motivated largely by semantics. Table 3 gives an overview of the most salient classificatory principles as well as the lexical frequency for each gender.

The distribution of human nouns across the two number-sensitive genders in Jul'hoan is of interest (see Dickens 2005: 31; Güldemann 2000: 8). The so-called "in-group" human gender (gender I) comprises basic human nouns and kinship terms, as well as the names for other hunter-gatherer ethnic groups, e.g. *!Xoon* and *Naroh*. Terms used to identify local Bantu pastoralists as well as European settlers, are grouped together in the "out-group" human gender (gender II), which includes other large animates. Evidence of speaker variation, however, suggests that this dichotomy is unstable. In the narrative extract in (30), the narrator explains how some Jul'hoan (in-group) came to live in *Nlloaq!'ae* having been resettled by Afrikaaner farmers, or *Bùrù* (out-group). Note, however, that when the two groups are referenced anaphorically in the same clause – the quintessential context for upholding this distinction – no distinction is made. The use of the "in-group" human plural AGR2 pronoun *sì* where AGR4 pronoun *hì̀* is expected suggests internal restructuring around a more basic animacy distinction between humans (gender I) and non-human animates (gender II).

(30) {The ancestors of the people who live in the south are from Nlloaq!'ae}

ká	*Bùrù-sì*	*kòh*	*nlhì̀ì*	***sì***		
when	Afrikaaner.2-PL	PST	take:PL	2.PRO		
ókáà	***sì***	*kòh*	*nlhì̀ì-ì*	***sì***	*kò*	*Nlloaq!'ae*
then	2.PRO	PST	take:PL-VE	2.PRO	MPO	PN.3

'When the Boers$_x$ took them$_y$ [the ancestors], they$_x$ took them$_y$ to Nlloaq!'ae.' [Dickens 1992: 14; Pratchett, fn.]

2.2.2 Deriflection system

A deriflection is the combination of nominal form classes across all number values and can be understood as "the morpho(phono)logical counterpart of genders" (Güldemann and Fiedler 2019: 99). Deriflections refer "in a more narrow sense to relevant morphology and phonology that interacts with gender" (Güldemann and Fiedler 2019: 99). In Jul'hoan, only a handful of the affixes described in the previous sections unambiguously interact with the gender system. As stated in the introduction, I have chosen to take a "less narrow" approach and include categories of typological, areal, and historical comparative interest (see Section 3). There are seven deriflections (see Figure 3), including one single-class deriflection. The plural suffixes converge on the same singular nominal form class. Table 4 provides an overview of the functional profile of each deriflection.

Table 4: Functional profile of deriflections in Tsumke Jul'hoan.

Deriflection	Function
-Ø	–
-Ø/-SÌ	number
-Ø/-SÍN	number (kinship)
-SÍ/-SÍ-SÌ	deverbal nouns of manner/place
-MÀ/-MH(Í)	diminutive (SG/PL)
-DÍ/-DÍ-SÍN	female/'feminine' (broad, fertile, left)
-G!OQ/-N‖AQÈ	male/'masculine' (thin, long, sharp, right)

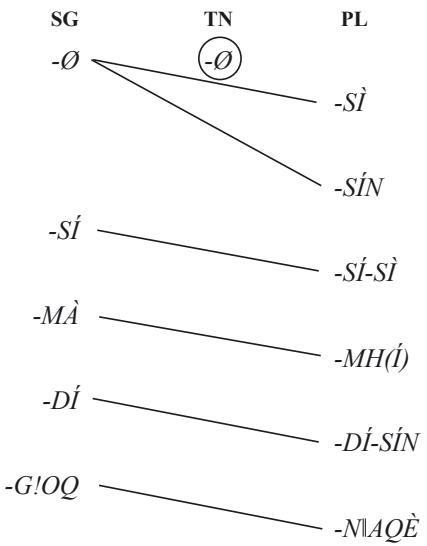

Figure 3: Deriflection system of Tsumkwe Jul'hoan.

2.2.3 Deriflections versus genders

The mapping of deriflections and genders shown in Figures 4a and 4b confirms the loose relationship between the two systems. While certain deriflections do interact with certain genders, it is at best ambiguous whether the motivating factor is morphology and not semantics, or perhaps a mixture of both. For example, the

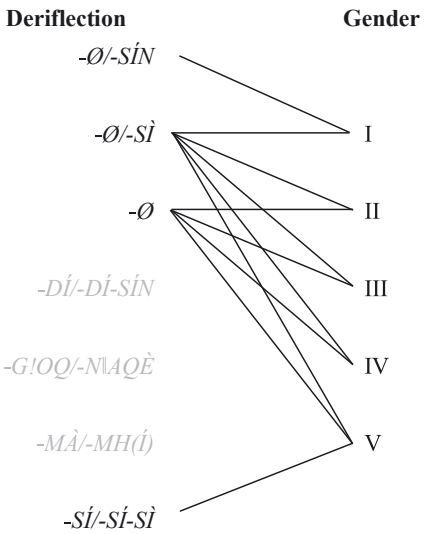

Figure 4a: Relationships between "core"deriflections and genders in Jul'hoan.

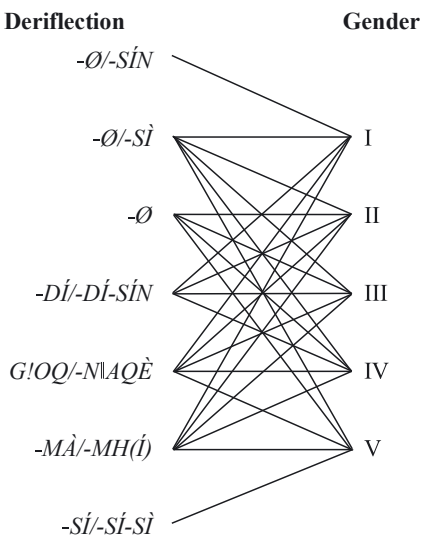

Figure 4b: Relationships between all deriflections and genders in Jul'hoan.

Table 5: Correlation of number marking, gender, and deriflection.

	I (143)	II (399)	III (526)	IV (112)	V (1,106)	Total (2,290)
-Ø/-Ø	0%	65.4%	33.8%	28.6%	10.3%	25.7%
-Ø/-SÌ	78.3%	34.6%	66.2%	71.4%	89.7%	73%
-Ø/-SÍN	21.7%					1.3%

deriflection for kinship terms is associated with the "human gender" (gender I), but the deriflection found with "non-kinship" human nouns (*-Ø/-SÌ*) is associated with every gender (Figure 4a). Furthermore, all deverbal nouns are in gender V, together with places, irrespective of their morphology.

Neutrality with respect to number is a property of the gender system that has been repeatedly stressed. Yet only 25.7% of nouns are transnumeral. Table 5 shows how number marking behavior – whether by contrastive agreement classes or deriflections – is distributed across the lexicon. One can clearly deduce that single-class genders tend to be composed of more nouns with marked plural nominal forms, while the majority of nouns in gender II which has contrastive agreement classes are morphologically neutral to number. Gender I, the "human gender", is the exception, and number is marked morphologically and by agreement.

Nouns behave with respect to number in four different ways in Jul'hoan (Figure 5; see also "number differentiability" in Corbett 2000: 171): nouns which mark a number opposition morphologically and by contrastive agreement classes (Type 1); nominal forms with no number opposition ("transnumeral") (Type 2); nominal forms for which number is neutralized across agreement classes (Type 3); and nouns for which nominal forms and agreement classes are neutral to number oppositions (Type 4). Type 4 accounts for 324 nouns (14.3 % of the lexicon) which are distributed across the three single-class genders. All nominal forms, including Type 4, trigger suppletive plural verb forms and for this reason are not considered *singularia tantum* (see ex. (1)).

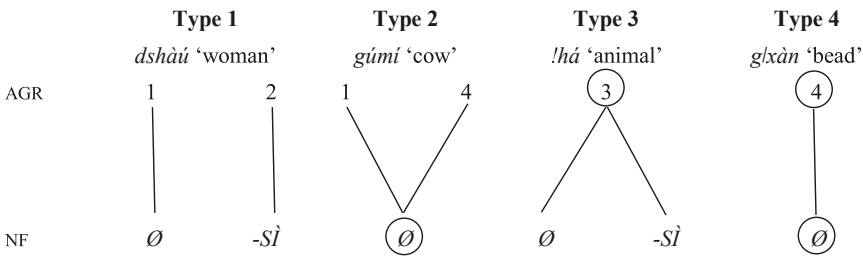

Figure 5: Number differentiability in Tsumkwe Jul'hoan.

3 Deriflection and gender systems in contact

The Kalahari Basin is home nowadays to languages with typologically diverse gender systems. Sotho-Tswana and Herero (Niger-Congo) exhibit gender systems broadly typical of Bantu languages in which number is an integral part of the agreement class system. In these languages natural sex is largely unimplicated, distinguishing them from Khoe languages (Khoe-Kwadi) which have sex-based genders. As for the 'non-Khoe' Khoisan languages such as Jul'hoan and Taa (Tuu family), being largely neutral to both number and natural sex oppositions makes them areally and typologically quite quirky (Güldemann 2000: 28). Nevertheless, Taa and Jul'hoan diverge in important ways, and certain Southeastern Ju varieties display incremental shift away from the "quirky" gender profile of non-Khoe languages.

The derivational use of post-nominal items derived from the words for 'child', 'man', and 'woman' is a feature shared by both Jul'hoan and Taa. In Jul'hoan, such elements are highly grammaticalized (see Section 2.1.2.2). In the East !Xoon variety of Taa, however, the post-posed item seemingly retains lexical properties, namely by controlling agreement behavior (see Güldemann 2013: 238f.).[4] Unlike in Jul'hoan, number is marked on both the semantic head and the modifier, as shown in (31) (Güldemann 2013: 238f.).

(31) a. East !Xoon (Taa, Tuu)
kâ *lə̀li* *Θàa*
? blue.wildebeest.1ii offspring.2
'a blue wildebeest calf'

b. *kâ* ***lə̀lu-te*** ***Θ'àni***
? blue.wildebeest.4ii-PL offspring.2
'blue wildebeest calves' [after Traill 1994: 53]

Some scant evidence of identical post-nominal items prior to the grammaticalization exists in some Ju lects. In Angolan !Xun (NW Ju), the post-nominal *dé* 'female' can be construed as a head noun and as a functional gram, shown in (32). Thus, Jul'hoan is not representative of the entire Ju language complex.

(32) a. Angolan !Xun (Northwestern Ju, Ju, Kx'a)
tcí ***dé*** ***yà****-ndu'à*
thing.3 woman.1 1.PRO-DEM
'that woman'

4 In Taa the situation is far from homogeneous, with evidence of gender assignment in some complex nominals clearing according to semantics (Tom Güldemann, p.c.).

b. ***tci***-*dé* ***ka***-*ndu'à*
thing.3-F.SG 3.PRO-DEM
'that woman' [after Heine and König 2015: 139]

The encoding of size and natural sex by means of grammaticalized words are of broader areal and historical interest. Some Bantu languages in southern Africa also exhibiting such functional suffixes. As pointed out by Güldemann (1999), this is "markedly distinct from canonical prefix morphology in Bantu nouns" (Güldemann 1999: 49). The diminutive is marked in most Bantu languages by way of agreement classes; however, in some Bantu languages of southern Africa, a diminutive suffix derived from *-yana 'child' is attested (Güldemann 1999: 59). This can be used in addition to or in lieu of contrasting nominal prefix classes, as illustrated by the examples from Herero (33) and Venda (34).

(33) Herero (Bantu R30, Niger-Congo)
o-m-bahu > *o-ka-pahona*
O-M.9-locust O-KA.13-locust:DIM
'locust' 'small locust' [Engelbrecht 1925: 96]

(34) Venda (Bantu S20, Niger-Congo)
tshi-kali > *tshi-kalana*
TSHI.7-clay.pot TSHI.7-clay.pot:DIM
'small clay pot' 'very small clay pot' [Poulos 1990: 87]

Such non-canonical morphology is also used to mark natural sex distinctions. The common Bantu root *-kadi 'wife, woman, female' has given rise to another derivational suffix in languages such as Tsonga (Güldemann 1999: 57–58).

(35) Tsonga (Bantu S50, Niger-Congo)
m-hala > *m-hala-kati*
M.9-impala M.9-impala-F
'impala' 'impala ewe' [Baumbach 1987: 182]

Güldemann (1999: 71–77) convincingly suggests that the emergence of derivational suffixes in Bantu languages in southern Africa is due to historical contact with languages related to those spoken in the Kalahari Basin today, i.e. modern "Khoisan". The host-final position of the derivational items of an identical semantic domain is an areal feature of the Kalahari Basin, possibly preceding the expansion of Bantu languages into the area (see also Heine 1976: 56).

Language contact may also explain the incremental change away from the non-Khoe gender profile in some Ju varieties in two remarkable ways first in terms of sensitivity to natural sex and, second, in terms of sensitivity to number. In the

Southern Jul'hoan lect – a SE Ju variety that is closely related to Tsumkwe Jul'hoan but set in a vastly different sociolinguistic context (see e.g. Pratchett 2020: 10ff.; Suzman 2000) – speakers have innovated a sex-based distinction for plural "in-group" humans only (Pratchett 2020: 165–167, 2018). For plural "in group" females, the third-person plural form *cì* [ʃì] has been innovated to give rise to a fifth agreement class (AGR5, see Table 6). Nominal forms denoting plural "in-group" males, however, trigger AGR3. This development recycles an agreement class already present in the system but previously unassociated with human nouns. It is also perhaps no coincidence that the most differentiated (or "marked") agreement class becomes associated with terms denoting males, given that the suppletive nominal forms *!'hòàn~nllàqè* and *g!òq ~ nllàqè* 'man~men' are seemingly the most "marked" in the entire lexicon. This would be an elegant way of maintaining the marking asymmetry. For singular "in-group" human referents, the two new genders both converge on AGR1, which becomes a "default" singular agreement class and remains neutral to natural sex. From a cross-linguistic perspective, it is seemingly uncommon for sex distinctions to enter a language via the plural pronouns first (Denis Creissels, p.c.). Nevertheless, it is in keeping with the tendency in Jul'hoan for the plural category to be more marked than the singular.

Table 6: Agreement classes of Southern Jul'hoan (Pratchett 2020: 165).

AGR	Number	PRO	POSS	PROX	Basic semantics	
					human	non-human
1	SG (TN)	*hà*	*má*	*hè*	singular	singular
2	PL	*sì*	*hì*	*hè*	plural	–
3	SG, PL, TN	*ká*	*gá*	*kè*	male "in-group" plural	abstract, body part, mass count
4	SG, PL, TN	*hì*	*hì*	*hè*	plural	plural
5	PL	*cì*	*hì*	*hè*	female "in-group" plural	–

The innovations to the agreement class system result in two new number-sensitive, sex-based genders, gender VI for "in-group" females and gender VII for "in-group" males (Figure 6). This gives rise to a total of seven genders in Southern Jul'hoan formed from five agreement classes, compared to five genders formed from four agreement classes in Tsumkwe Jul'hoan (cf. Figure 2): hence, the ratio of genders to agreement classes increases in Southern Jul'hoan.

The innovation of additional genders composed of a pair of contrastive agreement classes is not the only way that Southern Jul'hoan diverges with respect to encoding a number opposition. A study of 207 nouns revealed a dramatic reclassification of nouns from single-class genders either toward gender II or the semantically broader single-class gender V (Pratchett 2020: 166). As a result, the

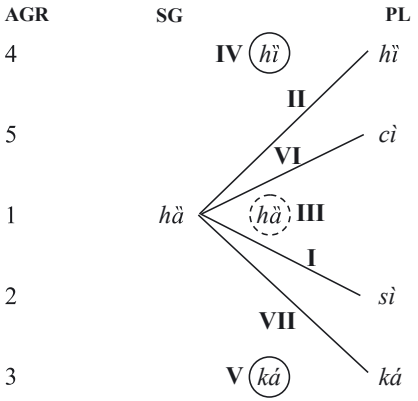

Figure 6: Southern Jul'hoan gender system (cf. Pratchett 2020: 166).

single-class gender III is markedly reduced, which seems to reflect the generalization of the *hã̀* pronoun (AGR1) as having a strictly singular number value. The study also showed a notable increase in the inflectional encoding of number across the board, such that one may question the status of the single-class deriflection *-Ø/-Ø* in Southern Jul'hoan (see Pratchett 2018).

The innovations to the Southern Jul'hoan gender system can be summarized as an increase in the role of inflectional morphology to mark a number opposition across the lexicon and an increase in number-sensitive genders. Furthermore, speakers have innovated genders sensitive to natural sex, albeit discrete in the lexicon. These are canonical properties of gender in Khoe languages (see Job and Güldemann, this volume). The presence of Khoe languages such as Khoekhoe has slowly increased in the Southern Jul'hoan language area around Gobabis since the settlement of the Oorlam ethnic group in the mid-nineteenth century. Today, many local Jul'hoan are bilingual in Khoekhoe (known locally as Nama), and professing Khoe/Nama identity is not uncommon (Pratchett 2020: 19). Conceivably, contact with Khoekhoe has motivated the innovations remarked in Southern Jul'hoan. Yet such intense contact has not resulted in complete assimilation or attrition. The sex-based distinction, currently quite discrete and applying solely to "in-group" human referents, is an innovation that elegantly maintains a more archaic feature of the language, one that reflects the Jul'hoan world view by distinguishing hunter-gatherers from other ethnic groups. This distinction was previously made by classifying humans into two different genders (gender I and II). With the inclusion of all human nouns into a semantically generalized "human gender" in Southern Jul'hoan, the "in-group" versus "out-group" distinction was eroded – and example (30) suggests a similar tendency among speakers of Tsumkwe Jul'hoan. That

speakers subsequently borrow a new categorical distinction (i.e. natural sex) from their linguistic landscape to uphold a more culturally salient distinction makes a powerful statement about the role of language ideologies.

4 Conclusions

Jul'hoan can be characterized as having a pronominal gender system with agreement classes and genders that are largely insensitive to number. With the exception of discrete innovations in some varieties, the gender system is uninfluenced by natural sex distinctions. This combination of properties distinguishes the Jul'hoan gender system from gender systems found in the languages of Africa (see Güldemann 2000: 28) and from languages which typically inform linguistic typology. From an areal perspective, it is remarkable that the use of derivational morphology in Jul'hoan has no influence on the agreement class system. This is markedly different to the situation in Taa, illustrating important divergence in two otherwise typologically similar gender systems.

The comparison between Tsumkwe Jul'hoan and Southern Jul'hoan illustrates the heterogeneous nature of gender systems even in closely related language varieties. This reinforces the results of a comparable study of Taa varieties (see Kießling 2008). Furthermore, a combination of language internal and external pressures, namely the over-generalization of number marking on the one hand and contact with typologically different languages on the other, does not necessarily engender attrition or simplification in the language system. The Southern Jul'hoan gender system has become more complex in comparison to its sister language, developing an additional agreement class and two new genders with a sex-based distinction for "in-group" human nouns. In so doing, Southern Jul'hoan provides evidence of the first non-Khoe language variety in which natural sex distinctions are encoded by the gender system.

Abbreviations

Abbreviations follow the Leipzig glossing rules, except the following:

AGR	agreement
AGT	agentive
ASSC	associative
C	consonant
D	dual
DIM	diminutive

E	exclusive
EZ	elder sister
EMPH	emphatic
ID	identification marker
MPO	multi-purpose oblique
N	nasal consonant
NF	nominal form class
NW	Northwestern Ju
NMZ	nominalizer
PN	proper name
SE	Southeastern Ju
TN	transnumeral
V	vowel
VE	valency external

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